

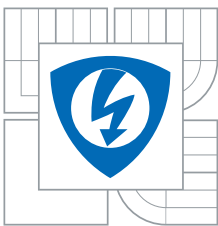


BEST ENGINEERING COMPETITION

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Case study



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Case study

About the case study

The aim of case study is resolve actual technical problem. All of you are participants – students of different professions with different background. Whole case study is chronically described bellow. It should roughly help you to plan your actions.

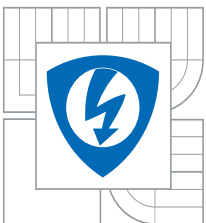
The problem should be discussed and solved in each working team. By getting to know the problem and resolving it, write down all your ideas, calculations and other useful cognitions. Try to organize your time and suitably distribute the tasks.

Each and every one of you can contribute by the final resolution with own specific knowledge. The final presentation of your resolution can last 10 minutes max.

On the basis of originality, economic use of materials, technical accomplishment, quality presentation and the costs of your project, the jury will value your resolution.

Problem Introduction

Your work will focus on ways to utilize phase change materials (PCM). Substances, which melting or solidifying at certain temperatures and therefore can store or release large amounts of energy. In spite of versatile potential application the large scale of potential commercial utilization is still subject to research and brings many problems. Your task will be sought to introduce the best possible use of these materials on commercial level. More specific information can be found either in appendix or on the internet.



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Task

International company BESTAK Ltd. is planning to open Czech branch focusing on sale of phase change materials. Your task, as a project manager will be to compile the project, where all the following points have to be assumed:

Technical Part

- Selection of suitable PCM materials and its application on basis of all technical aspects
- Form all requirements for a given material and define its advantages and disadvantages
- Remember to also indicate the proposed method of transportation and maintenance of selected product number or raw materials

Business Part

The Main Goal of the Project

- Characteristics of the project focusing, respectively what the company will deal with
- Product description

Market Analysis, Marketing

- Analysis and forecast of market demand, the extent of the market
- Consumer Characteristics
- The sensitivity of demand to price and price on demand, in case of time season, product prices, etc.
- Analysis of competition, the status and market share competition, include both Czech and foreign importers, if they exist
- A difference of approach against major competitors
- The method of placing products on the market - advertising, promotion, distribution

Total Need For Investment, Leasing

Try to characterize the extent of all investments and economical balances.



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Recommended Timetable

1. Intro (08.00 – 09.00) 1 hour

Foreword and team forming. The explanation of the problem and briefing.
Eventual questions.

2. Problem background (09.00 – 12.00) 3 hours

In this time organize yourselves in teams and approach the problem systematically. Distribute the tasks efficiently, regarding individual abilities and knowledge. Make list of all elements that you intend to include in the project. Decide, in which brand of material use would be the best to focus and study about all the aspects.
The technical part should be done in this time

3. Project Plan (13.00 – 16.00) 4 hours

Make a Project plan where all elements and risks u will assume.
Basically the problem must be solved.

4. Conclusion of solving the problem (16.00 – 17.00) 1 hour

In this time terminate your resolutions. Small corrections can be made but do not change your general resolutions, remember you have only one hour left. Start to consider how to make an interesting presentation of your project and your presentation must be ready to the end of the time. You can use also flipchart and marker. Try to cooperate as well as you can. Make a final performance and be persuasive – remember –better performance, more points!